

Royal Society submission to the Environmental Audit Committee's inquiry into the UN Millennium Ecosystem Assessment

This document is the Royal Society response to the UK House of Commons Environmental Audit Committee's Inquiry into the UN Millennium Ecosystem Assessment (MA)¹. It has been approved on behalf of the Royal Society Council by Professor David Read, the Vice-President and Biological Secretary. Our response has been prepared in consultation with members of the Society's Environment and Marine Advisory Networks, the Global Environment Research Committee and other experts in the field.

Summary

- We are supportive of the MA process and its findings, and believe that the MA Framework provides a useful mechanism for enabling the implementation of the ecosystems approach to policy.
- The MA framework and conclusions have had an impact on environment and biodiversity policy and science in the UK, EU and internationally, but they have had little impact on other areas of policy and science. To maximise impact the MA must influence sectors like the international development cooperation, trade, and financial sectors.
- The real impact of the MA will become evident in the coming years when governments have had an opportunity to incorporate the MA's findings into their policy strategies.
- A UK Assessment report could be a useful exercise for testing the assumptions of the MA models and current knowledge of UK drivers of ecological change, and could provide a helpful model for other countries.
- The UK government Global Environmental Change Committee has successfully reviewed the current gaps and weaknesses of the MA at a workshop hosted by its biodiversity sub-committee in early 2006.
- We believe that the priorities for international and UK follow up to the MA should include:
 - internationally coordinated funding and resources for the MA's long-term implementation, communication, development, monitoring and review;
 - the continuation of an appropriately funded MA Secretariat (or equivalent body) to co-ordinate the above;
 - the production of successive MAs in the future with the possibility of inter-governmental efforts to standardise the production of future assessments;
 - an increase in internationally coordinated funding for research into the role of biodiversity in ecosystem functioning, and the linkages between biodiversity, ecosystems, and human well-being;
 - funding and resources to improve the links between ecological and economic research, improve ecosystem valuation methodologies, and to improve dialogue between economists, ecologists and social scientists;
 - the full integration of MA processes into existing national policy processes, such as implementation programmes for the Millennium Development Goals (MDGs) (with a higher priority given to MDG7), and national sustainable development strategies;
 - prioritisation of the MA into UK cross-cutting policy, and high level political support for the MA processes.

¹The terms of reference for the Select Committee inquiry can be found online at http://www.parliament.uk/parliamentary_committees/environmental_audit_committee/eac_25_07_06b.cfm

General Comments

- 1 The Royal Society is supportive of the MA process and its findings and believes that it provides the most complete and up to date expert summary of the links between ecosystems and human well-being and the status of biological diversity. It identifies the variety of ways in which biodiversity and ecosystem goods and services have contributed to human wellbeing over the last century and highlights the importance of including this information in the economic analyses of climate change and sustainable development plans for the future. The MA framework provides a useful mechanism for enabling the implementation of the ecosystems approach to policy.
- 2 The Royal Society is aware of only two assessments carried out to date on the strengths and weaknesses of the MA and its implementation. The first was a report on the initial impact of the MA from the Director of the MA, Professor Walter Reid (Reid 2006); and the second was a report produced by the UK Government Global Environmental Change Committee's (GECC) Biodiversity Sub-Committee (GBSC) following a workshop held in London in February 2006 to evaluate the MA and identify priorities for future implementation (GECC 2006).
- 3 We welcome the Committee's inquiry into the MA which we believe will help to increase the profile of the MA and add momentum to its implementation in UK Government. However it is difficult for us to comment on the impact in detail at this stage because of its relatively recent release (the Technical Assessment volumes were published in January 2006, and the last synthesis report on Marine and Coastal Systems was published in June 2006). The real impact of the MA will become evident in the coming years when governments have had an opportunity to incorporate the MA findings into their policy strategies.

Responses to the EAC Inquiry questions

- 4 In our submission we have chosen to respond only to questions 1,2, 4 and 9.

Inquiry Question 1. How successful has the MA been in influencing decision making at UK, EU and international levels? How can we encourage adoption of the MA response options in countries that have been slow to do so such as the US, Brazil and India?

- 5 There is a general feeling amongst the scientific community that although the MA framework and conclusions have had a relatively high profile in the environment and biodiversity policy and science sectors in the UK, EU and internationally, it has as yet had little impact on other areas of policy and research. For example, the MA findings have been considered and taken into account to varying degrees by the Conventions responsible for its establishment: the Convention on Biological Diversity (CBD), the Convention to Combat Desertification (UNCCD), the Ramsar Convention on Wetlands, and the Convention on Migratory Species (CMS).
- 6 The Royal Society believes that to have any real impact the principles of the MA need to be implemented outside of the environment sector, for example in the international development, trade, and financial sectors. This however will be dependent on whether or not funding and resources are made available for further communication of the MA's findings, for further development and implementation of the MA framework, and for future monitoring and reporting (further clarification is provided in paragraphs 17-19).

- 7 Within the scientific community there appears to be a growing use of the frameworks and ideas put forward in the MA, and evidence that they are beginning to influence research agendas. On an international level, the International Council for Science (ICSU) has adopted the MA conceptual framework as the basis for its environmental program. In July 2006, ICSU also set up a joint UNESCO, ICSU, and United Nations University (UNU) scoping group of experts to assess the gaps in scientific knowledge identified through the MA and to produce a report before mid-2007 on the priority research gaps that need to be filled in order to improve any future global or sub-global Millennium Ecosystem Assessment.
- 8 On a European level, the European Academies Science Advisory Council (EASAC) recently launched a project to investigate the importance of biodiversity for certain priority European ecosystems defined using the MA framework. The aim of this work is to build on, and contribute to the evidence base provided by the MA process. At the UK level, we are aware that the UK Biodiversity Research Advisory Group (BRAG) is currently developing a strategy for research on the role of biodiversity in ecosystem function. This draft strategy draws heavily on the MA framework and conclusions in identifying research priorities for the UK.
- 9 Some of our Fellows felt that adoption of the MA processes in some countries including the US, Brazil and India had been slow because of difficulties in identifying the economic value of ecosystems. Although the MA went some way towards identifying the linkages between ecosystem services and human wellbeing, significant further work is required to identify appropriate valuation methodologies and to improve collaboration between economists and ecologists. This is essential if the economic contributions of ecosystems to society are to be identified and communicated to policy makers.
- 10 Furthermore, the current momentum behind the implementation of the Millennium Development Goals (MDGs) in developing countries could be a useful mechanism for communicating and implementing the MA framework. This however requires that strategies aimed at delivering the MDG's be revised to ensure that they are compatible with the MA framework. In particular we believe that it is important that more emphasis is placed on the importance of MDG7 (*to ensure sustainability*) in international development cooperation policy.

Inquiry Question 2. To what extent have MA findings and processes been incorporated into UK departments? How aware are departments of the importance of the MA? What steps are being taken to ensure that the findings of the MA are being considered and, where relevant, acted upon in the departments? Is there any evidence of real change in government as an outcome of the MA?

- 11 Although there has been little evidence of the incorporation of the MA findings and processes into UK departmental strategies, we have observed a growing appreciation in both the academic and policy communities of the achievements and utility of the MA.
- 12 The Royal Society is aware that Defra has been proactive in communicating and implementing the results of the MA in addition to the GBSC workshop referred to in paragraph 2 and the ongoing work of this group. Defra has for example used the MA methodology to develop draft environmental reporting guidelines for UK companies. In a recent speech to delegates attending a meeting held at the Royal Society, hosted by the Foundation of Science and Technology (July 2006), the UK Minister

for Biodiversity, Landscape and Rural Affairs noted that Defra was developing “a more holistic approach to natural environment policy”. This approach is based on the findings of the MA with an emphasis on the development of an *ecosystems approach*, integrating policy making around the conservation and enhancement of entire ecosystems. The programme of work includes the funding of research and improved dialogue between Defra and the research councils and aims to improve the coherence and consistency of research funding to develop the evidence base on the condition and value of ecosystems. Similarly, we are aware that some of the Defra bodies (eg the Joint Nature Conservation Committee (JNCC) and Centre for Environment, Fisheries and Aquaculture Science (CEFAS)) have been using the MA to guide their corporate work programmes and research strategies.

- 13 Although one of our respondents noted that The Department for International Development (DfID) officials appear to have been influenced by the MA we note that the principles of the MA do not appear to be reflected in either *DFID's approach to the environment* (DFID 2006a) or its *White paper on International Development* (DFID 2006b).

Inquiry Question 4. Should the UK develop its own assessment report and would it be relevant to include external UK impacts?

- 14 The Royal Society is aware that there has been some debate about the development of a UK assessment report in the scientific community. However, the conclusion of Royal Society discussions has been that a UK assessment report could be a useful exercise. The UK is unique globally in terms of the quality of biodiversity and ecosystems information available. Therefore the application of the MA framework to the UK could provide a useful model for other countries. A country level study using MA methodologies could be useful to the future development of the MA by testing the methodologies and identifying any issues relating to scaling up and scaling down processes. Smaller case study assessments to investigate specific issues within a designated area could also be useful for testing the assumptions of the models and current knowledge of key drivers of change in the UK.
- 15 There was general agreement that external UK impacts would have to be considered for a UK MA assessment to be useful. It was also felt that the UK overseas territories could provide useful case studies for the application of the MA framework as an alternative to an assessment of the UK as these are generally the UK's biodiversity hotspots.

Inquiry Question 9. Were there any gaps or weaknesses in the MA? How should the MA be followed up? Are the mechanisms and expertise which were developed to create the MA now being lost due to a lack of confirmation of a formal follow up procedure?

- 16 The strengths and weaknesses of the MA were reviewed at the GBSC workshop held in February 2006 '*Evaluating the Millennium Ecosystem Assessment: messages, knowledge gaps, and policy implications*' where scientific and policy gaps and priorities were identified. Fellows and staff of the Royal Society were involved in this workshop. Rather than repeating the results of this meeting we refer you to the meeting report (GECC 2006).
- 17 The Royal Society believes that one of the greatest weaknesses of the MA was the failure to provide resources and funding for the period beyond its release. This has undoubtedly affected how widely it has been communicated and implemented and many of our Fellow's recently voiced concerns that despite having established how vital ecosystem services are to the global economy the MA will cease to be relevant unless funding is provided for further development, implementation, monitoring and

reporting. We believe that the absence of a formal and coordinated monitoring and review process is a major shortcoming and that this will compromise the ability of the MA process to achieve its objectives.

- 18 We suggest that development, implementation, monitoring and reporting will require coordination at the global, regional and national levels. An MA secretariat if appropriately resourced could provide this coordination function. The CBD secretariat or the proposed International Mechanism of Scientific Expertise on Biodiversity (IMOSEB) body may be suitable alternatives, however these bodies would also need to be appropriately resourced and their biodiversity focus taken into account.
- 19 In terms of future development and implementation of the MA some of our respondents felt that inter-governmental efforts should be made to standardise the production of successive global and sub-global assessments to ensure a continuity of effort in the future. It was felt that this would help to encourage and channel scientific work on ecosystem services in a globally coordinated manner and that this would have the additional benefit of encouraging the development of the production of high quality science in the world's poorest countries. We believe this should be accompanied by a significant increase in research funding from governments and international agencies to improve understanding of ecosystems and biodiversity, and the linkages between biodiversity, ecosystem functioning and human well-being.
- 20 There are obvious mechanisms for the integration of MA processes into national policy. These include strategies for the implementation of the Millennium Development Goals (MDG's), national sustainable development strategies, poverty reduction strategies, and national biodiversity strategies. In the UK, government policy must encourage more basic and applied environmental research. Our Fellows have voiced concerns about the reduction in government support for biodiversity and ecosystems research, particularly following the recent restructuring of the Centre for Ecology and Hydrology and the announcements regarding the Defra budget.

References

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